Permit Fact Sheet

General Information

Permit Number:	WI-0021199-10-0	
Permittee Name:	VILLAGE OF ALBANY	
Address:	206 North Water Street	
City/State/Zip:	Albany WI 53502	
Discharge Location:	West Bank of the Sugar River, approx. 250 feet east of effluent discharge manhole. SE ¼ of NE ¼, Section 33, T3N R9E.	
Receiving Water:	Sugar River (Lower Middle Sugar River Watershed, SP2 – Sugar-Pecatonica River Basin) in Green County	
Stream Flow ($Q_{7,10}$):	91 cfs	
Stream Classification:	Warm Water Sport Fish (WWSF), non-public water supply	
Design Flow(s)	Annual Average	0.125 MGD
Significant Industrial Loading?	None	
Operator at Proper Grade?	Facility is Basic with subclasses A4 – Ponds, Lagoons, and Natural Systems, SS – Sanitary Sewage Collection System. Three operators are certified except for subclass SS, of which one individual will need to be certified in before the end of the permit term. The SS subclass can be a standalone certification and the OIC need not have any other wastewater subclass certifications.	
Approved Pretreatment Program?	N/A	

Facility Description

The Village of Albany operates a three-cell stabilization pond wastewater treatment system providing secondary treatment to a combination of domestic and commercial wastewater. Discharge is on a fill and draw basis. The facility is designed to treat an average daily flow of 125,000 gallons per day. As a fill and draw discharger, they have the capacity to discharge up to 0.6 MGD. Discharges the last 5 years occur during the growing season, occur 5-8 times a year, and generally last for approximately seven consecutive days. Treated effluent is discharged via outfall 001 to the Sugar River.

Sample Point Designation		
Sample Point Number	**Discharge Flow, Units, and Averaging Period**	**Sample Point Location, Waste Type/sample Contents and Treatment Description (as applicable)**
701	0.079 MGD (June 2015 – June 2020 Average)	Representative influent samples shall be collected at the main lift station prior to discharge to the primary pond.
001	0.404 MGD (June 2015 – June 2020 Average)	Representative effluent samples shall be collected at the effluent manhole during periods of discharge, prior to discharge to the Sugar

Sample Point Designation		
Sample Point Number	**Discharge Flow, Units, and Averaging Period**	**Sample Point Location, Waste Type/sample Contents and Treatment Description (as applicable)**
	Excluding days with no discharge	River.
004	0 Dry US Tons (Sludge is only landspread when depth inhibits effective treatment)	Representative lagoon sludge samples shall be taken throughout each lagoon and then combined for one composite sample in the year 2022. If sludge needs to be removed form a lagoon, a composite grab sample of that lagoon sludge may be needed prior to land spreading.

1 Influent - Proposed Monitoring

Sample Point Number: 701- INFLUENT

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		MGD	Continuous	Continuous	
BOD5, Total		mg/L	Weekly	Grab	
Suspended Solids, Total		mg/L	Weekly	Grab	

Changes from Previous Permit:

None.

Explanation of Limits and Monitoring Requirements

BOD_5 and Total Suspended Solids (TSS) – Tracking of BOD_5 and TSS is required for percent removal tracking requirements found in s. NR 210.05, Wis. Adm. Code and Section 5.4.6 of the permit.

2 Surface Water - Proposed Monitoring and Limitations

Sample Point Number: 001- EFFLUENT

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate	Daily Max	0.6 MGD	Continuous	Continuous	
BOD5, Total	Weekly Avg	45 mg/L	Weekly	24-Hr Flow Prop Comp	
BOD5, Total	Monthly Avg	30 mg/L	Weekly	24-Hr Flow	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
				Prop Comp	
Suspended Solids, Total	Monthly Avg	60 mg/L	Weekly	24-Hr Flow Prop Comp	
pH Field	Daily Max	9.0 su	Weekly	Grab	
pH Field	Daily Min	6.0 su	Weekly	Grab	
Nitrogen, Ammonia Variable Limit		mg/L	Weekly	See Table	Using the daily pH result look up the applicable ammonia limit in the pH Depended Daily Maximum Ammonia limit table in the permit and enter on the daily record.
Nitrogen, Ammonia (NH3-N) Total	Daily Max - Variable	mg/L	Weekly	24-Hr Flow Prop Comp	Enter the daily Ammonia result on the daily record and compare to the Nitrogen Ammonia Variable Limit to determine compliance.
Phosphorus, Total	Monthly Avg	5.0 mg/L	Weekly	24-Hr Flow Prop Comp	
Phosphorus, Total		lbs/day	Weekly	24-Hr Flow Prop Comp	Report lbs/day of phosphorus discharged.
WQT Credits Used (TP)		lbs/day	Weekly	Calculated	Report WQT TP Credits used. See subsections in the permit for instructions on water quality trading.
WQT Computed Compliance (TP)	Monthly Avg	0.3 mg/L	Weekly	Calculated	Limit is effective June 30, 2022. Report the WQT TP Computed Compliance value. See subsections in the permit for instructions on water quality trading.
WQT Computed Compliance (TP)	6-Month Avg	0.1 mg/L	Weekly	Calculated	Limit is effective June 30, 2022. Report the WQT TP Computed Compliance value. See subsections in the permit for instructions on water quality trading. Compliance with the 6-month average limit is evaluated at the end of each six-month period on Jun. 30

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
					& Dec. 31.
WQT Computed Compliance (TP)	6-Month Avg	0.1 lbs/day	Weekly	Calculated	Limit is effective June 30, 2022. Report the WQT TP Computed Compliance value. See subsections in the permit for instructions on water quality trading. Compliance with the 6-month average limit is evaluated at the end of each six-month period on Jun. 30 & Dec. 31.
WQT Credits Used (TP)		lbs/month	Weekly	Calculated	See 'Reporting Monthly Total TP Credits' in subsection 2.2.1.4 of the permit. Available TP Credits for the calendar year are specified in the approved Water Quality Trading Plan.
Nitrogen, Total Kjeldahl		mg/L	See Listed Qtr(s)	24-Hr Flow Prop Comp	Annual in rotating quarters. See Nitrogen Series Monitoring section in the permit.
Nitrogen, Nitrite + Nitrate Total		mg/L	See Listed Qtr(s)	24-Hr Flow Prop Comp	Annual in rotating quarters. See Nitrogen Series Monitoring section in the permit.
Nitrogen, Total		mg/L	See Listed Qtr(s)	Calculated	Annual in rotating quarters. See Nitrogen Series Monitoring section in the permit. Total Nitrogen shall be calculated as the sum of reported values for Total Kjeldahl Nitrogen and Total Nitrite + Nitrate Nitrogen.
Chloride		mg/L	Monthly	24-Hr Flow Prop Comp	Jan. 1, 2024 - Dec. 31, 2024. Monitoring Only.

Changes from Previous Permit

Requirements for Water Quality Trading have been added since the facility is using trading to comply with final phosphorus limits. Rotating Quarterly monitoring for Total Kjeldahl Nitrogen, Nitrite + Nitrate Total Nitrogen, and Total Nitrogen has been added. New timeframe for chloride monitoring is now calendar year 2024.

Explanation of Limits and Monitoring Requirements

Please refer to the Water Quality Based Effluent Limits memo prepared by Sarah Luck, dated July 21, 2020, for the detailed calculations and explanation.

> Note: Throughout this fact sheet all citations of administrative code for example, s. NR 102.06, Wis. Adm. Code, will be referenced as s. NR 102.06, and reflect current Wisconsin Administrative Code.

Categorical Limits

BOD_5, Total Suspended Solids (TSS), and pH – No changes are recommended in the categorical permit limitations for BOD_5, TSS, or pH. Because the reference effluent flow rates and receiving water characteristics have not changed, limitations for these water quality characteristics do not need to be re-evaluated at this time. Where the receiving water is classified as Warm Water Sport Fish communities as defined in s. NR 104.02(3)(b), the categorical limits for BOD_5, TSS, or pH are those limits enumerated in ss. NR 210.05(1)(a) – (d).

Water Quality Based Limits and WET Requirements and Disinfection (if applicable)

Phosphorus – Phosphorus requirements are based on the Phosphorus Rules that became effective 12/1/2010 as detailed in NR 102 Water Quality Standards and NR 217 Effluent Standards and Limitations for Phosphorus. Chapter NR 217 of the Wis. Adm. Code addresses point source dischargers of phosphorus to surface waters. The code categorically limits industrial dischargers of more than 60 pounds of phosphorus per month and municipal dischargers of more than 150 pounds of phosphorus per month to 1.0 mg/L unless an alternative limit is approved. NR 217 also specifies WQBELs (water quality based effluent limits) for discharges of phosphorus to surface waters of the state from publicly and privately owned wastewater facilities, noncontact cooling water discharges which contain phosphorus, concentrated animal feeding operations that discharge through alternative treatment facilities and a facility/site that is regulated under NR 216 where the standards in NR151 and 216 are not sufficient to meet phosphorus criteria. WQBELs for phosphorus are needed whenever the discharge contains phosphorus at concentrations or loadings that will cause or contribute to an exceedance of the water quality standards.

Ammonia – Current acute and chronic ammonia toxicity criteria for the protection of aquatic life are included in Tables 2C and 4B of ch. NR 105, Wis. Adm. Code. Subchapter IV of ch. NR 106 establishes the procedure for calculating water quality-based effluent limitations (WQBELs) for ammonia.

Chloride – If the permittee's effluent data shows that a calculated WQBEL for chloride cannot be met, then the permit will include a chloride effluent limitation. s. NR 106.83 of subchapter VII also provides for some permittees to obtain temporary relief from a chloride WQBEL through the use of a "chloride variance".

Total Nitrogen Monitoring (NO_2+NO_3, TKN and Total N) – Based on the "Guidance for Total Nitrogen Monitoring in WPDES Permits" dated October 2012, quarterly effluent monitoring for Total Nitrogen is required for muni facilities discharging to the Mississippi River Basin whose permit applications show > 40 mg/L Total Nitrogen due to industrial contribution.

3 Land Application - Proposed Monitoring and Limitations

Municipal Sludge Description						
Sample Point	**Sludge Class (A or B)**	**Sludge Type (Liquid or Cake)**	**Pathogen Reduction Method**	**Vector Attraction Method**	**Reuse Option**	**Amount Reused/Disposed (Dry Tons/Year)**
004	B	Liquid	Fecal	Injection	Land	0 (Lagoon System)

Municipal Sludge Description						
Sample Point	**Sludge Class (A or B)**	**Sludge Type (Liquid or Cake)**	**Pathogen Reduction Method**	**Vector Attraction Method**	**Reuse Option**	**Amount Reused/Disposed (Dry Tons/Year)**
			Coliform		Application	
Does sludge management demonstrate compliance? Not required to be submitted to the department until removal is expected						
Is additional sludge storage required? **N/A**						
Is Radium-226 present in the water supply at a level greater than 2 pCi/liter? If yes, special monitoring and recycling conditions will be included in the permit to track any potential problems in land applying sludge from this facility						
Is a priority pollutant scan required? **No**, design flow is less than 5 MGD. Priority pollutant scans are required once every 10 years at facilities with design flows between 5 MGD and 40 MGD, and once every 5 years if design flow is greater than 40 MGD.						

Sample Point Number: 004- LAGOON SLUDGE

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Once	Composite	
Arsenic Dry Wt	Ceiling	75 mg/kg	Once	Composite	
Arsenic Dry Wt	High Quality	41 mg/kg	Once	Composite	
Cadmium Dry Wt	Ceiling	85 mg/kg	Once	Composite	
Cadmium Dry Wt	High Quality	39 mg/kg	Once	Composite	
Copper Dry Wt	Ceiling	4,300 mg/kg	Once	Composite	
Copper Dry Wt	High Quality	1,500 mg/kg	Once	Composite	
Lead Dry Wt	Ceiling	840 mg/kg	Once	Composite	
Lead Dry Wt	High Quality	300 mg/kg	Once	Composite	
Mercury Dry Wt	Ceiling	57 mg/kg	Once	Composite	
Mercury Dry Wt	High Quality	17 mg/kg	Once	Composite	
Molybdenum Dry Wt	Ceiling	75 mg/kg	Once	Composite	
Nickel Dry Wt	Ceiling	420 mg/kg	Once	Composite	
Nickel Dry Wt	High Quality	420 mg/kg	Once	Composite	
Selenium Dry Wt	Ceiling	100 mg/kg	Once	Composite	
Selenium Dry Wt	High Quality	100 mg/kg	Once	Composite	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Zinc Dry Wt	Ceiling	7,500 mg/kg	Once	Composite	
Zinc Dry Wt	High Quality	2,800 mg/kg	Once	Composite	
Nitrogen, Total Kjeldahl		Percent	Once	Composite	
Nitrogen, Ammonium (NH4-N) Total		Percent	Once	Composite	
Phosphorus, Total		Percent	Once	Composite	
Phosphorus, Water Extractable		% of Tot P	Once	Composite	
Potassium, Total Recoverable		Percent	Once	Composite	

Changes from Previous Permit:

New timeframe for monitoring sludge is now calendar year 2022.

Explanation of Limits and Monitoring Requirements

Requirements for land application of municipal sludge are determined in accordance with ch. NR 204 Wis. Adm. Code. Ceiling and high-quality limits for metals in sludge are specified in s. NR 204.07(5). Requirements for pathogens are specified in s. NR 204.07(6) and in s. NR 204.07 (7) for vector attraction requirements. Limitations for PCBs are addressed in s. NR 204.07(3)(k).

Water Extractable Phosphorus – Water extractable phosphorus (WEP) is the coefficient for determining plant available phosphorus from measured total phosphorus. In Wisconsin, the Penn State Method is utilized and is expressed in percent. While a total P may be significant, the WEP may show that only a small percentage of the P is available to plants because of factors such as treatment processes and chemical addition that "tie-up" phosphorus limiting the amount of phosphorus that is plant available. As part of the Wisconsin's nutrient management plan (NMP) requirements, the accounting of all fertilizers must be included over the NMP cycle. The fertilizer value of the waste needs to be communicated to the farmer and accounted for in the NMP.

4 Schedules

4.1 Annual Water Quality Trading Report

As specified in the Permit, the permittee shall submit annual water quality trading reports in accordance with the following schedule.

Required Action	Due Date
Submit Annual WQT Report: Submit an annual WQT report that shall cover the period from 10/1/2020 through 12/31/2020. The WQT shall include the total number of pollutant credits used, the source of the pollution reduction credits, a summary of annual inspections performed, and identification of noncompliance or failure to implement any terms or conditions of the approved water quality trading plan (WQT-2020-000X).	01/31/2021
Submit Annual WQT Report #2: Submit an annual WQT report that shall cover the period from	01/31/2022

January 1, 2021 to December 31, 2021.	
Submit Annual WQT Report #3: Submit an annual WQT report that shall cover the period from January 1, 2022 to December 31, 2022.	01/31/2023
Submit Annual WQT Report #4: Submit an annual WQT report that shall cover the period from January 1, 2023 to December 31, 2023.	01/31/2024
Submit Annual WQT Report #5: Submit the 5th annual WQT report. If the permittee wishes to continue to comply with phosphorus limits through WQT in subsequent permit terms, the permittee shall submit a revised WQT plan, WQT-2020-000X, including a demonstration of credit need, compliance record of the existing WQT, and any additional practices needed to maintain compliance over time.	01/31/2025
Annual WQT Report Required After Permit Expiration: In the event that this permit is not reissued on time for a September 30, 2025 reissuance date, the permittee shall continue to submit annual WQT reports by January 31 each year covering the total number of pollutant credits used, the source of the pollution reduction credits, a summary of annual inspection reports performed, and identification on noncompliance or failure to implement any terms or conditions of the approved water quality trading plan (WQT-2020-000X) for the previous calendar year (i.e., the annual report cover the calendar year 2023 shall be due by January 31, 2024: the annual report cover calendar year 2024 shall be due by January 31, 2025; etc.).	

4.1.1 Explanation of Annual Water Quality Trading Report

Subchapter NR 217.17, Wis. Adm. Code, allows the department to provide a schedule of compliance for water quality-based phosphorus limits where the permittee cannot immediately achieve compliance. Schedule 5.1 in the permit has the remaining action items from the original compliance schedule given to the permittee in the 2013 permit reissuance.

Attachments:

Substantial Compliance Determination

Map(s)

Water Quality Based Effluent Limits

Public Notice

Proposed Expiration Date:

A permit term of five years is proposed in this reissuance with an expiration date of December 31, 2025.

Justification of Any Waivers from Permit Application Requirements

No waivers were requested from permit application requirements.

Prepared By:

Sean Spencer – Wastewater Specialist

Date: 10/23/2020

cc: Nathan Wells